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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,533	09/15/2000	Simon Peter Valentine	3 Com - 81 (3022US)	1915

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MICHAELSON AND WALLACE
PARKWAY 109 OFFICE CENTER
328 NEWMAN SPRINGS RD
P O BOX 8489
RED BANK, NJ 07701

EXAMINER

NG, CHRISTINE Y

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 12/03/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/662,533

Applicant(s)

VALENTINE ET AL.

Examiner

Christine Ng

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being unpatentable over U.S. Patent No. 5,734,824 to Choi.

Referring to claim 1, Choi discloses in Figures 5 and 7 a method for discovering the topology of a network comprising initially resolving the positions of the end stations (end stations; Figure 5, Elements S1-S6) and subsequently resolving the topology of the remaining devices (Bridges and LANs; Figure 5, Elements 50-54 and 40-46). As shown in Figure 5, each port (Elements 50a-54a, 50b-54b and 54c) is associated with a bridge

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(Elements 50-54) and a filtering database (Elements 71-75). Each filtering database (Elements 71-75) "records from which port a message enters the bridge as well as which station was the sender for that message" (Column 10, lines 57-59) until eventually, each filtering database (Elements 71-75) "will indicate which ports on a particular bridge are associated with which stations" (Column 10, line 67 to Column 11, line 1). After the positions of the end stations are resolved, the topology of the remaining devices (Bridges and LANs, Elements 50-54 and 40-46) are resolved. Refer to Column 13, lines 12-14 and Column 16, lines 5-12. As shown in Figure 7, a network management module (NMM) associated with each LAN determines the topology of the bridges and LANs by sending adjacency requests PDUs to other NMMs, in order to determine which LAN is adjacent to another LAN (separated by one bridge). Refer to Column 13, line 65 to Column 14, line 4 and Column 16, lines 13-52.

Referring to claim 2, Choi discloses in Figure 5 that the step of initially resolving the positions of the end stations (Elements S1-S6) comprises, for each managed device (Bridges, Elements 50-54), determining which ports (Elements 50a-54a, 50b-54b and 54c) are only connected to an end station (Elements S1-S6). Each port (Elements 50a-54a, 50b-54b and 54c) is associated with a bridge (Elements 50-54) and a filtering database (Elements 71-75). Each filtering database (Elements 71-75) "records from which port a message enters the bridge as well as which station was the sender for that message" (Column 10, lines 57-59) until eventually, each filtering database (Elements 71-75) "will indicate which ports on a particular bridge are associated with which stations" (Column 10, line 67 to Column 11, line 1).

Referring to claim 3, Choi discloses in Figure 7 that the step of resolving the topology of the remaining devices (Bridges and LANs, Elements 50-54 and 40-46) comprises querying for each managed device (LAN and designated bridge, Elements 40-46 and 50-54), which ports have learnt the address (Bridge ID, Port Number) of another managed device (LAN and designated bridge, Elements 40-46 and 50-54). Each LAN is assigned an address (Bridge ID, Port Number) indicating the ID of its designated bridge and port number. For example, the address for LAN 40 is "10,1" indicating that LAN 40 is connected to port 1 of bridge 50 (bridge 50 has a bridge ID of 10). Refer to Column 20, lines 55-65. A network management module (NMM) associated with each LAN determines the topology of the bridges and LANs by sending adjacency requests PDUs to other NMMs in order to determine which LAN is adjacent to another LAN (separated by one bridge). Refer to Column 13, line 65 to Column 14, line 4 and Column 16, lines 13-52. As shown in Figure 9A, each NMM then establishes an adjacency database (Figure 9A) showing all of the LANs to which it is connected to (Figure 9A, Elements 903-908), using the LAN ID. Refer to Column 20, lines 19-35. Figure 9B shows a compilation of all of the adjacency databases from all LANs. As shown in Figure 9B, lines NMM 81 and 84, port 1 of bridge 10 (LAN ID 10,1) has learned the address of LAN 42 (LAN ID 20,2) and LAN 44 (LAN ID 10,2), whereas port 2 of bridge 10 (LAN ID 10,2) has learned the address of LAN 40 (LAN ID 10,1) and LAN 48 (LAN ID 30,2).

Referring to claim 4, Choi discloses in Figure 3 a computer program on a computer readable medium loadable into a digital computer (NMM), the program

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including software for carrying out the method of claim 1. The NMM "is a separate computer system having data and command process capabilities in order to execute software comments" (Column 6, lines 44-47). After the positions of the end stations are resolved, "the processing to discover the total active topology of the IEEE 802.1D bridges and LANs is performed within each designated NMM of each LAN" (Column 13 lines 18-20). The NMM is capable of performing the method of claim 1 via a "microprocessor 101 executing program steps stored in RAM 102 and/or ROM 103 that act to analyze message data entering from the signal generation port 108 of each NMM" (Column 13, lines 29-32). Refer to Column 7, lines 21-47 and Column 13, lines 26-46.

Allowable Subject Matter

4. Claim 5 is allowed.

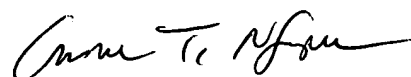
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (703) 305-8395. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Chau can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8395.

C. Ng
November 24, 2003



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600